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EVALUATION OF  
THE ORGANIZATION AND OPERATION  
OF THE SANTA CLARA COUNTY ASSESSOR'S OFFICE

FEBRUARY 27, 1976



ARTHUR ANDERSEN & Co.

SAN JOSE, CALIFORNIA



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SANTA CLARA COUNTY ASSESSOR'S OFFICE  
EVALUATION OF ORGANIZATION AND OPERATIONS  
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*Evaluation of the organization and operation of the  
Santa Clara County Assessor's Office.*

February 27, 1976

Mr. Howard W. Campen  
County Executive  
70 West Hedding Street  
Room 614  
San Jose, California 95110

Dear Mr. Campen:

The attached report describes the results of our evaluation of the organization and operation of the Santa Clara County Assessor's Office. We have concluded our study and have addressed the objectives described in your Request for Proposal and our proposal of November 26, 1975.

We would like to disqualify ourselves from the installation work which will be required to implement our recommendations. We want the recommendations to stand on their own, without the potential criticism that they were made to generate another consulting project. We would, however, like to propose a short follow-up review in, say, six months, to give you feedback on what has been done with the recommendations.

The conclusions and recommendations have been discussed with representatives of the Board of Supervisors, the County Executive's Office and the Assessor's Office. All of the discussions, however, were based upon discussion outlines or drafts of portions of this report. There will undoubtedly be further questions and requests for clarification once this final report has been read. Please call us at your convenience.

The cooperation from Mr. Dwight Mathiesen, County Assessor, and members of his office has been excellent. He and his staff exerted every effort to give us candid and timely answers to our questions.







EXECUTIVE SUMMARY

The purpose of this project was to evaluate the effectiveness of the Santa Clara County Assessor's Office and to recommend changes in organization, procedures and reporting practices. The thrust of the study was particularly directed towards those areas which have the most impact on equalization of real property assessments. As shown by Exhibit 1, the bulk of the tax roll is made up of the residential, commercial and industrial properties.

The objectives which we listed in our proposal and our conclusions are as follows:

1. Define the extent of assessment inequities. We investigated two sources of data which indicate some inequities:

State Board of Equalization survey statistics relating to equalization among commercial, industrial, and residential properties and recent sales of residential and business properties. We have concluded that the statistics relating to assessment equalization among commercial, industrial and residential properties are inconclusive.

We analyzed sales which took place in June, July and August, 1975. Our analysis of



residential sales indicates that there are inequities between groups of residential properties. We also analyzed commercial and industrial sales and found that a comparison with residential sales implies that residential properties are assessed relatively higher than industrial properties and lower than commercial properties. However, the sales analysis for commercial and industrial statistics is also inconclusive.

Section III describes the results of our review and the basis for our conclusions.

2. Identify organizational and procedural control improvements which will help correct current assessment inequities and prevent them in the future. We concur with the State Board of Equalization recommendation that commercial and industrial properties should be reappraised more frequently and that the problem is primarily a shortage of manpower. There is, in general, agreement that appraisers should be shifted from residential to commercial and industrial appraisals. The Santa Clara County Assessor would, in fact, like to do so. Consequently, we concentrated our efforts on understanding the



work in the Real Property Division and the soon to be implemented Computer Assisted Appraisal system which will have a significant impact on Real Property Division workload.

We concluded that the shift of appraisers from residential into commercial and industrial work can be made. The Computer Assisted Appraisal system will provide the mechanism for monitoring the quality of residential work, and will also serve as a basis for setting workloads such that adequate coverage for residential property can be provided. A key question, however, is the timing of the shift of personnel. We recommend that one-half of the appraisers be shifted this July and the remainder in July, 1977.

We have also concluded that a major expenditure for additional people to correct inequities will not be necessary. There is, however, an opportunity to improve the operation of the Assessor's Office. This report includes a description of organizational changes and management control techniques we recommend to accomplish these improvements.

The report describes how the new Computer Assisted Appraisal system can be used more effectively. It also includes the results of our review of the



Personal Property Division. The major finding in this area is that there is an opportunity to significantly reduce personal property statement processing costs.

3. Define practical solutions. Our recommendations are spread throughout this report. They are summarized in the Recommendation Summary which follows the Table of Contents.

4. Review the State Board of Equalization's recommendations and the Assessor's responses.

Much of the following text deals with the subjects of these recommendations. A complete listing, with the Assessor's responses and our comments, will be found in Exhibit 17. With relatively minor qualifications, we agree with the Board's recommendations. For the most part, the Assessor does too.







REAL PROPERTY DIVISION

During the project, we reviewed the organization, functions, and management control techniques used by the Real Property Division. We looked at quality control reviews, performance reporting, workload planning and distribution, training practices, and activity standards. We evaluated span of control and internal coordination.

We had conversations with the chief appraiser, assistant chief appraiser, district supervisors, senior appraisers, appraisers, and assessment clerks. We observed the working environment in the office, observed appraisal procedures, reviewed appraisal records and documentation, attended assessment appeals sessions, and accompanied appraisers on field visits.

Present Organization and Types of Appraisals

The Real Property Division is divided into five geographical districts, a special appraisal unit, and an agricultural unit as shown by Exhibit 2. The special appraisal unit is headed by a supervisor and is responsible for appraising special properties in the commercial and industrial categories. These properties include banks, golf courses, mobile home parks, motels, shopping centers, and others.

The agricultural unit consists of two appraisers reporting directly to the assistant chief appraiser.



The five geographical districts are responsible for appraising commercial, industrial, and single family and multi-family residential properties. Each district is headed by a supervisor who has two senior appraisers reporting directly to him. These seniors have responsibility for appraising all of the commercial and industrial properties located within their districts and reviewing the appraisals of residential properties in the district. Appraisers are responsible for the single family and multi-family residential property appraisals. Each district also has an apartment specialist who handles all multi-family properties with ten or more units. Each appraiser is expected to review annually all assessments in his area and property-type assignment. Generally, the appraisers have worked in small geographic areas defined by "map books". The term map book relates to the bound groups or books of maps which describe a geographic area. The County is divided into approximately 180 map books. The County has recently been divided into 60 neighborhoods, which in turn will have up to four or five sub-neighborhoods. The neighborhood and sub-neighborhood classification is to be used to make property groupings more homogeneous than the old "map book" groupings were.

The Real Property Division uses a number of different approaches for appraising properties and adjusting assessed values. For residential properties these include:



1. Conventional or "walk-through" appraisal. This involves a visit to the property and an inspection of the condition and quality of the interior and exterior of the property. Normally in conjunction with this type of appraisal, the appraiser will use comparable property sales to estimate property values. If there are no comparable sales, a replacement cost approach is used to estimate the value; this is simply using industry construction cost data to estimate how much it would cost to replace the house and depreciation factors to reduce replacement cost to present value.
2. Drive-by appraisal. This is a brief review of the exterior of the property to note new improvements, additions to or deterioration of the property.
3. Factoring (or trending). This is an across the board percentage change in the assessed values for a group of properties. The changes are made neighborhood-by-neighborhood for geographic areas whose properties tend to move uniformly or remain static as a group.

For commercial and industrial properties the approaches include:

1. Conventional appraisals. These are analogous to the conventional appraisals for residential properties except that comparable sales are normally not used. For commercial properties the "income



approach" is used; this involves determining value as a function of the income which the property can be expected to generate and the rate at which the marketplace discounts future income. For industrial properties, the replacement cost approach is generally used.

2. Factoring (or trending). This is similar to the approach used for residential property.

#### Current Reappraisal Policies and Guidelines

Supervisors make workload assignments according to their judgement of which map books require attention. Map books are assigned to appraisers with consideration given to the number of properties per map book and the supervisor's judgement of the degree of appraisal complexity.

Various events trigger a conventional or walk-through appraisal throughout the year and when an appraiser begins to work a map book. These events include:

1. Building permits. Currently, the policy is to reappraise all properties for which a building permit is issued.
2. Sales exceptions. When sales prices far exceed or fall below current roll values. There are, however, no formal written guidelines for what is a significant enough deviation to correct a conventional appraisal.



3. Taxpayer requests.
4. Appeals to the Assessment Appeals Board. The properties involved in an appeal are always visited in preparation for the appeal hearing.
5. Previously unnoticed improvements. The improvements might be noticed while an appraiser is driving through an area.

There are no formal guidelines for when and how to reappraise properties. Appraisers spend approximately 25% of their time in the field. In our experience, much of this field time is spent "driving by" properties. Sometimes, multiple visits are made to the same property (when a building improvement is being appraised, and the improvement is unfinished at the time of an appraisal visit).

### Conclusions

1. The lack of formal guidelines for when and how to reappraise properties makes it difficult, if not impossible, to assure consistency between appraisers, organizational units, and groups of properties.
2. Workload assignments are difficult to monitor because of the lack of formal appraisal guidelines.
3. The organization of the Real Property Division impedes quality control reviews of appraisal work and results in not taking full advantage of property-type expertise.



Recommendation 1: Set formal guidelines for when and how to adjust values and reappraise properties.

The different methods for revaluing properties require a different amount of time and effort; the use of each method should be consistent throughout the County. The guidelines should be very specific and, for example, could use the following approach:

1. Walk through

- a. All properties where computer calculated values differ from trended roll values by plus or minus \$\_\_\_\_\_ and/or \_\_\_\_\_.%
- b. All building permits whose stated value exceeds \$\_\_\_\_\_ or \_\_\_\_% of roll value.
- c. Taxpayer requests for a site visit.
- d. Properties whose assessments are appealed.
- e. All properties sold at sales prices which differ from trended roll values by plus or minus \_\_\_\_%.

2. Drive by all other properties and make value

judgements using one of the following approaches:

- a. Computer Assisted Appraisal (CAA) estimated value (as described in Section IV).



b. Cost update (as described in Section IV).

c. Trending, based on a sales analysis.

We did not attempt to determine the specific dollar and percentage ranges described above. The new Computer Assisted Appraisal (CAA) system can be used to determine the number of properties falling into each guideline area.

By using appraiser workload estimates and the guidelines developed as above, Real Property Division management will be in a position to estimate staffing requirements accurately. In doing this, management may determine that staffing requirements to handle proposed reappraisal guidelines are out of line with staffing levels. This would require an adjustment of the guidelines or additional staff.

This approach can make the appraisal effort more consistent than it presently is and can provide the basis for relating workload to tangible requirement indicators.

Recommendation 2: Restructure the Real Property Division by property-type specialization.

We recommend the following approach to the reorganization:

1. Place all apartment specialists in a multi-family appraisal unit.



2. Have apartment specialists appraise all multi-family properties containing five or more units.
3. Place a supervisor in charge of multi-family and agricultural property appraisals. This is a seemingly curious combination, but both property types require income approach expertise.
4. Establish units responsible for appraising only commercial and industrial properties. These units would be responsible for appraising the commercial and industrial properties which the senior appraisers presently handle.
5. Continue the special appraisal unit as it now exists.
6. Keep a large percentage of the single family residential appraisers in a "pool". This pool would be a flexible crew that would be moved into those areas requiring the heaviest concentration of appraisal work during a given period. The pool concept is an expansion of the Residential Appraisal Team (R.A.T.) approach used now.
7. Place the remaining residential appraisers into single family residential appraisal units which would also be responsible for multi-family properties containing two, three, or four units. The single family residential units should contain



a "core" of appraisers responsible for geographic areas. (Familiarity with an area aids the appraiser in making uniform appraisals.)

The following benefits would be derived from the new organizational structure:

1. Quality control reviews would be improved since supervisors, senior appraisers and appraisers within a given appraisal unit would be concentrating on the same type of property.

2. Property-type specialization could be better developed.

For example, senior appraisers would not be supervising one type of property appraisal and, at the same time, appraising a second type of property. Single family residential appraisers would not be required to also appraise multi-family properties having apartment characteristics. Related to property specialization is the use of similar appraisal techniques. Since commercial and industrial properties are sold infrequently, the income and replacement cost approaches, rather than the comparable sales approach, are the common appraisal valuation techniques. Residential properties, on the other hand, are sold more frequently, and, therefore, the comparable sales approach to value is used. Under the proposed



organization, the senior appraiser would not be reviewing appraisals made by a method of valuation which he does not use in appraising his types of properties.

3. The pooling concept would also promote more flexible staffing. It would encourage Real Property Division management to concentrate experienced appraisers in areas where heavy reappraisal work is required.

A potential problem of the recommended reorganization is the effect on appraiser advancement. Appraisers generally acknowledge that commercial and industrial property appraisals require more skills than residential property appraisals. The natural advancement path for appraisers is from residential to commercial and industrial properties. This appears to conflict with an organization by property type. Appraisers could still, however, be shifted to different types of properties periodically to provide training or permanently as part of normal advancement.

#### Staffing Levels

Several key questions concerning staffing were brought to our attention at the start of the project:

1. What is the proper mix of commercial-industrial appraisers to residential appraisers?
2. If a shift of appraisers from residential to commercial-industrial is warranted, when should it occur?



These questions can be answered only after considering the impact of the Computer Assisted Appraisal (CAA) system on the Real Property Division. Staffing levels, including appraisers and senior appraisers, but not supervisors, are shown on Exhibit 3.

The Assessor anticipates that residential appraisers can handle 10,000 accounts per year under CAA. The chief appraiser estimates that 10 appraisers are required to provide full appraisal coverage of multi-family properties. The Assessor's target staffing levels when CAA is fully implemented are based upon these guidelines and are also shown on Exhibit 3. If the Assessor is able to fill all authorized appraiser positions, 35 appraisers would be available for appraising commercial and industrial properties. Appraisers would each be assigned an average of 471 commercial and industrial properties - approximately the coverage provided by the special appraisal unit now.

We believe these target levels are attainable; however, it is impractical to think these levels can be reached this year. Several factors will slow the transition:

1. Work required in correcting residential property characteristics will be heavy in the first two years the CAA system is used.
2. Appraisers will require time to learn to use CAA effectively.



3. The number of appeals may increase when CAA is implemented. As other counties have experienced, CAA will identify previously underassessed properties and will generate appeals and appraisal requirements.

Recommendation 3: Shift appraisers from residential to commercial and industrial properties using a phased approach.

Exhibit 4 depicts what we see as a reasonable shift of appraisers as CAA becomes fully implemented. Approximately 50% of the appraisers shifting to commercial and industrial properties should do so in July of 1976. The remaining 50% should be shifted by the following July. The assumptions and requirements which, in our opinion, can make the shift possible are:

1. The use of "property describers" to help resolve CAA system data base problems. As described in Section IV, the property describers would work on cleaning up the computer file of property characteristics to improve the results of the CAA value calculations.

The property description function should be done by a combination of: appraisers as they walk through properties, members of the R.A.T. group and additional staff hired to do the property description work.



The number of people required to do the property description work will depend upon the appraisal guidelines set (i.e., how many properties will be "walked through"), the accuracy of the property characteristics now on the file and the availability of the R.A.T. group. Property describers can normally complete 20 properties per day, and a reasonable goal would be to update property characteristics once every six years. It would take six years for the equivalent of 10 full-time property describers to complete updating all of the single family dwellings in the County.

2. The establishment of realistic, formal reappraisal guidelines for the type of appraisals to be done on properties in each map book area or neighborhood.
3. The assumption that CAA master file property characteristics are reasonably complete. This should be verified before July, 1976, by using the CAA analysis capability.
4. The assumption that data processing support will be adequate.
5. The assumption that experiences in other counties are indicative of what can be expected in Santa Clara County. San Mateo County, for example, was able to increase the number of properties revalued per



appraiser by 30% in the year the Assessor's office converted to a CAA system. See Section VI for more discussion of staffing in other counties.

Exhibit 4 also shows seven multi-family property appraisers being required in two years. This estimate is based on the expectation that CAA analysis and regression usage will be expanded by then to include multi-family properties.

The recommendation for a phased shifting of appraisers also has an impact on the Real Property Division reorganization discussed earlier. The reorganization should be phased in step with the shift of appraisers. Exhibit 5 shows our recommended reorganization. We recommend the following approach to phase into this new organization:

1. By July, 1976: Convert two current appraisal districts to a commercial-industrial appraisal unit and a multi-family residential appraisal unit.
2. In 1977:
  - a. Establish a second commercial-industrial appraisal unit.
  - b. Reduce the number of remaining residential appraisal units from three to two.

This reorganization will require careful planning and coordination by the chief appraiser, assistant chief appraiser



and supervisors. Most of the assistant chief appraiser's time should be devoted to monitoring the implementation of CAA, monitoring the reorganization and assisting the supervisor in charge of the commercial and industrial appraisal unit.

The key to being able to successfully shift appraisers out of the residential units into commercial-industrial units will be the extent to which the new CAA system capabilities are used. Unless there is a mechanism for providing and monitoring reappraisal guidelines, the result could very well be increased workloads compensated for by more frequent reliance on appraisals without site visits.

#### Workload Peaks and Valleys

County assessors' offices have a number of different activities which typically peak at different times of the year. For example:

- Assessed values are, by law, as of the March 1 lien date. Consequently, all properties under construction must be reviewed close to March 1 to determine their value on that date.
- Shortly after appraisal notices are mailed out, the public begins to inquire about how the values were set, how an appeal can be lodged, what their increase in taxes will be, etc. In Santa Clara County this inquiry period lasts approximately three months. During this period, appraisers spend most of their time in the office answering questions.
- Computer processing is applied. The Santa Clara Assessor's office plans to begin releasing the bulk of the computer-prepared "value sheets" (as described in Section IV) in August of each year. The value sheets will provide the basic tools for appraisers to begin reviewing neighborhoods.



Recommendation 4: Explore ways to smooth out appraisers' workload peaks and valleys.

The objective should be to maximize the time appraisers spend in the field - to allow them to do more appraisal work. Several things to explore are:

1. Spread out the mailing of assessment notices. The Sacramento County Assessor's office, for example, begins sending notices in October and continues for approximately eight months.
2. Encourage the taxpayers to come in and discuss questions. Have them come to temporary locations set up as question-answer rooms. The locations could be close to the neighborhoods which received the assessment notices. The Sacramento Assessor does this and finds that most questions are resolved within five to ten days of the time the neighborhood location is set up.
3. Begin releasing CAA information to appraisers as soon as the guidelines and workload estimates have been completed.

Because of the planning which will be required to implement this recommendation, the earliest it can be done is in calendar year 1977.



Performance Evaluation

The assistant chief appraiser, supervisors and senior appraisers monitor the performance of appraisers by relying upon their own experience. Supervisors and senior appraisers have risen to their levels of supervision within the same district where they once appraised properties. They supervise the appraisers' work in their areas primarily through a familiarity with the properties that the appraisers are covering. Supervisors establish workloads by relying on their judgement of the complexity and number of properties being appraised by each appraiser. Senior appraisers do not have a consistent approach to reviewing appraisal work. They do not have uniform quality standards by which to measure appraisal work.

Appraisers do not have firm performance objectives. They do not know what it takes to be promoted within the organization. Generally, advancement from simple to complex properties and from residential to commercial-industrial properties and handling a larger number of accounts is thought to be the best way to promotion.

An employee evaluation form was used in the past for reviewing performance with appraisers, but was discarded as part of the last union settlement. Rating forms do not guarantee effective performance review and discussion. However, they do offer an opportunity for the supervisor and employee to formally discuss the employee's performance. Currently, this opportunity is lacking in the Real Property Division.



Recommendation 5: Develop appraisers' performance objectives and conduct regular personnel status reviews.

The reviews should be conducted by the appraisal unit supervisors individually with each appraiser. During the review, the appraiser's performance should be compared to objectives. Objectives should include things such as the quality of the appraisal documentation, approach and effectiveness in dealing with the public, quantity of work (number of building permits, sales exceptions followed up, etc.), soundness of sales analyses, and the degree of equalization for properties appraised.

A discussion should include strengths and weaknesses of performance and approaches for strengthening specific areas. In general, there should be an open discussion between the supervisor and the appraiser so that the appraiser will know what performance objectives are and how he or she is performing against those objectives.

#### Documentation

Appraisal records for commercial and industrial properties contain considerable data but seldom any narrative describing how they were interpreted.

Documentation inconsistency is also evidenced in residential appraisals. For example, some appraisers record sales data, including sales prices, in the map books for which they are responsible. Building permit activity is carefully



recorded on the appraisal records by some appraisers. Other appraisers record neither sales prices nor building permit activities.

Recommendation 6: Develop a consistent approach to appraisal documentation.

Documentation standards should be clear to both the appraiser doing the work and the senior appraiser and/or supervisor reviewing the work. The basis for the valuation judgement should be documented, whether that be evidence of cost or an income review, a brief memo of an in-depth reappraisal, reference to a sales analysis, or the reasoning behind a percentage application.

A complex commercial or industrial property appraisal would require more supporting documentation than a simple residential appraisal. We recommend the development and use of a work program for appraising complex commercial or industrial properties. The work program would contain specific steps to be completed during the appraisal, or reappraisal, and a checklist of factors to be considered in valuing the property. The work program would serve as both a guide to the appraiser and a review tool for the supervisor.

Documentation consistency allows easier appraisal review by supervisors and seniors. The purpose of this review is to insure uniform quality in all appraisal work.



Appraisers' Clerical Work

Appraisers have assumed clerical tasks which detract from time available for appraisals.

One assessment clerk is assigned to each district. The clerks do a variety of appraisal-related clerical jobs. As the clerks' workloads have grown, some of these clerical tasks have shifted back to the appraisers. Consequently, appraisers are handling some tasks that could be delegated to clerks. Examples are:

1. Posting new roll values to assessment control records.
2. Posting new sales to map books.
3. Transcription of building permit activity data to appraisal records.
4. Pulling and refiling appraisal records.

Recommendation 7: Review paperwork processing in the Real Property Division.

This review will enable division management to establish the most efficient flow of paper processing for the office. After establishing this flow, duties of the clerical personnel and the appraisers should be defined and differentiated.

The division has already done some work in this area by analyzing the paper flow of several forms to be used in the Computer Assisted Appraisal program. This effort should be expanded to cover all primary paper flows in the division.



Public Inquiries

Appraisers spend considerable time answering appraisal and tax-related questions of an informational nature for the public. The Real Property Division places great emphasis on "selling" the appraisal program to taxpayers. More than 20% of the appraisers' time is spent in public contact. This contact includes office visits by the taxpayer, telephone conversations, and questions answered by the appraiser while making appraisals. This function is important. However, further efforts should be made to utilize the appraisers' contact with the public more effectively.

We were told that most of the appraisal staff is in the office during the May-June period when public inquiries are heavy. Recommendation 4, described earlier, addresses the desirability of keeping appraisers in the field more. Another approach to the same end would be the use of published material to respond to or avoid public inquiries.

Recommendation 8:    Distribute published assessment practices  
                                 material to taxpayers.

The published material should cover tax and assessment terms, tax dates, the relationship of property taxes to assessed and full cash values, duties of the Assessor's office, and the appeal process. Other counties have developed this type of material and currently distribute it.



Several questions have to be answered before undertaking this project. To whom and when should the published material be distributed? Should distribution be to everyone on the tax rolls, or should the distribution be more selective, such as to residential property and small industrial property owners only? When large changes in assessed value are made? An approach to distributing the material is as follows:

1. Mail a simple, computer-addressed card to selected neighborhoods or cities. The mailings could be periodic, such as 1/3 of the County each year. Monitor the results of these mailings to see whether they reduce the number of inquiries.
2. Have appraisers drop off a pamphlet whenever they do a "walk-through" appraisal.
3. Mail a card or pamphlet to all property owners who have significant (larger than their neighbors?) increases in assessed value.
4. Mail a pamphlet to each new property owner when the sales questionnaire is sent out.

#### Time Reporting

The usefulness of the current time report is questionable. It requires very detailed time analyses by the appraisers, and considerable time is spent on completing it. The categories among which the appraiser is to spread his or her time are not clearly



delineated. Although the time reports are summarized periodically, the usefulness of these statistics is not clear.

Recommendation 9: Design and implement a new time reporting system.

The system should provide feedback for workload projections. It should report types of appraisals completed vs. scheduled, time spent vs. budgeted, hours spent by type of property, and should provide a way to isolate problem areas by type of property, location, or supervisor or appraiser.

Management Reporting

Our study of the Real Property Division included an evaluation of personnel control techniques and a review of management reports. We investigated which techniques are being used and determined whether they are being used effectively. The results of this analysis are shown on Exhibit 16.







EQUALIZATION STATISTICSCOMMERCIAL AND INDUSTRIAL VS. RESIDENTIALBackground

The recent (1975-76) State Board of Equalization Assessment Practices Survey report included statistics describing the relative quality of appraisals and assessment levels for residential, commercial and industrial properties. We understand that the interpretation of the median assessment ratio and coefficient of dispersion statistics led to the conclusion that commercial and industrial properties were appraised lower and less uniformly than residential properties.

Both the median assessment ratio and the coefficient of dispersion were determined from a sample of approximately 330 Santa Clara County properties which the State Board of Equalization selected in 1973, appraised, and then compared its appraised values with the values determined by the Santa Clara County Assessor's office. A number of statistics were developed, including:

1. Median assessment ratio. The assessment ratio for a specific property is the County Assessor's assessed value divided by the value determined by the State Board of Equalization appraisal. The median assessment ratio is that ratio which is exceeded by exactly half of the ratios and exceeds the other half of the ratios.



2. Unweighted mean assessment ratio. This is the arithmetic average of the assessment ratios. The unweighted mean assessment ratios were not displayed in the 1975-76 State Board of Equalization report. The unweighted mean ratios can be distorted if exceptionally high or low ratios ("outriders") are averaged with the more representative ratios.
3. Weighted mean assessment ratio. This is derived by dividing the Assessor's total assessed value for a group of properties by the State Board of Equalization's estimate of the full value of all those properties. This is the best test of over-assessment of one group of properties relative to other groups.
4. Coefficient of dispersion. This is a measure of the dispersion or variability of the ratios. A high coefficient of dispersion indicates that the individual items in the population, in our case the individual assessment ratios, vary from their median or mean more than do the ratios for which the coefficient of dispersion is lower.

The coefficients of dispersion for commercial and industrial properties were higher than the coefficient of dispersion for residential properties. They were also higher than the



Residential			Industrial		
County Value (000's)	Board Value (000's)	Ratio	County Value (000's)	Board Value (000's)	Ratio
\$ 40	\$ 60	.67	\$100	\$150	.67
40	50	.80	100	150	.67
40	44	.92	100	115	.87
40	38	1.10	100	91	1.10
40	38	1.10	100	64	1.60
-----	-----	-----	-----	-----	-----
\$200	\$230	4.59	\$500	\$570	4.91
-----	-----	-----	-----	-----	-----
Weighted mean = $\frac{200}{230} = .87$			Weighted mean = $\frac{500}{570} = .88$		
Unweighted mean = $\frac{4.59}{5} = .92$			Unweighted mean = $\frac{4.91}{5} = .98$		
Median = .92			Median = .87		

In the example, the residential median ratio is higher than the industrial median ratio. The two mean ratios, however, show the opposite relationship; the residential mean ratios are lower than the industrial mean ratios. As a group, the industrial properties bear an excessive share of the tax burden because the overassessed properties more than make up for the underassessed properties.

#### Reliability of Statistics

It is feasible to test the reliability of only one of the three different property-type average assessment ratios -- the unweighted mean ratios. The reliability test commonly used when data are sampled is known as a "confidence interval". In the current context, the confidence interval is the range on either side of the computed mean ratio within which one can say,



with a stated degree of assurance, that the ratio which would be derived by appraising all locally assessable properties of a given type lies. For example, one might find a 95% confidence interval of  $\pm 3\%$  for a ratio of 88%; this would mean that there were 95 chances out of 100 that the true ratio was between 97% and 103% of 88% -- i.e., between 85.4% and 90.6%.

The State Board of Equalization statistics are not conclusive regarding the equalization of commercial, industrial, and residential property assessed values. The median and mean assessment ratios and the coefficients of dispersion by property type were developed as a by-product of the State Board of Equalization survey. The sample of properties which the State Board of Equalization appraised was selected to test the assessment ratio for the entire roll; consequently, the size of the sample for each type of property was not large enough to justify a high degree of confidence suitable for making statistically valid conclusions between classes of property.

Exhibit 6 shows the weighted mean appraisal ratios from the latest (1973-74) State Board of Equalization survey. It also shows the size of the sample and the coverage by type of property. The second page of Exhibit 6 shows a history (1967-73) of the weighted mean appraisal ratios from the State Board of Equalization surveys. Exhibit 7 shows the 95% confidence intervals for the unweighted mean ratios. It shows the overlap in the intervals which is the basis for saying that the statistics are not conclusive regarding equalization.



SALES RATIO ANALYSIS

We used the new Computer Assisted Appraisal (CAA) system to recap sales ratios for the months of June, July and August, 1975. The sales ratios for properties shown in Exhibits 8 to 11 were calculated by dividing the full cash values as estimated by the Assessor's office by actual sales prices.

Residential Properties

The ratios for residential properties were developed from approximately 7800 sales which took place during the three-month period. We excluded approximately 1400 of these sales because the CAA master file indicated that the sales prices had not been verified. We also excluded approximately 220 sales for which sales ratios fell outside the range of .30 to 1.70 on the basis that these were either very unusual or included errors which would distort the overall results. In other words, we excluded the "outriders". We selected a three-month period to recap, rather than an entire year, in order to minimize the potential distortion which could be caused by different rates of appreciation among property groupings.

Higher vs. Lower Priced Homes

Exhibit 8 shows a comparison of sales ratios between homes in several sales price categories. The Exhibit shows sales ratios declining as sales prices increase, which implies that higher priced homes were appraised at lower percentages of their sales prices than were lower priced homes.



Exhibit 8 also shows the average tax effect if sales ratios were to be equalized. The tax effect was calculated by using the simplifying assumptions of a uniform county-wide tax rate of \$12.40 per \$100 of assessed value (the average 1975-76 county-wide rate) and the adjustment of assessed values to produce the county average sales ratio of .77.

This type of analysis would be distorted if different categories of property have different appreciation rates. A popular hypothesis is that higher priced properties have had higher inflation rates than lower priced properties. A recent report by the Real Estate Research Council of Northern California states:

"Single family residential property in the Peninsula area shows the region's (Northern California's) most rapid rate of appreciation over the past year with an overall rise of 1-1/2 percent per month."

The same report shows overall increases for homes selling for less than \$49,500 and more than \$49,500 (April, 1975 prices). The increases reflect annual appreciation rates of 18% and 19.5%, respectively, for these groupings of properties.

We tested the sensitivity of the sales ratios to differences in appreciation rates by calculating the difference in appreciation rates which would be required to make the sales ratios equal to those for the \$40,000-\$60,000 houses. The annual appreciation rates would have to be at least 48% for some groups of homes and as much as 202% for other groups in order to completely account for the differences in sales ratios.



Our conclusion remains unchanged. Higher priced homes are appraised lower relative to their sales prices than are lower priced homes.

#### Distribution of Map Book Sales Ratios

The Assessor has divided Santa Clara County into approximately 180 map books, or geographical areas. Generally, appraisers are responsible for specific map books. We analyzed the extent of variation between map books to test our assumption that this type of analysis would be useful on an ongoing basis. We analyzed the sales ratios for all of the map books with ten or more sales during the sample period. This included 155 of the map books. We then divided the ratios into intervals of five percentage points and grouped map books falling into each interval. Exhibit 9 shows these groupings.

The array generally follows the same pattern seen in the first sales analysis. Higher sales ratios exist for map books with lower average sales prices. More important, Exhibit 9 depicts the disparity of residential sales ratios across map books. It indicates that there are a number of map books for which the Assessor's office should review assessment levels more thoroughly.

#### Sales Ratio Disparity Among Cities

We selected six residential areas in Santa Clara County for our third sales analysis. Our objective was to determine whether there appeared to be a disparity of assessments between cities. Average sales prices ranged from \$33,700 to \$91,600 for



these cities. Some cities had substantially more sales than others. The results of this sales analysis are shown on Exhibit 10. As would be expected from the previous analysis, the areas with higher priced homes tended to be appraised at lower percentages of sales prices.

#### Commercial and Industrial Sales Ratios

We also analyzed sales of commercial and industrial properties. As with residential properties, we excluded unverified sales and the "outriders" for which sales ratios fell outside the range of .30 to 1.70.

Exhibit 11 shows a comparison of commercial and industrial sales ratios to the residential sales ratio. It implies that commercial and industrial properties are assessed relatively lower than residential properties. We cannot, however, conclude definitely that residential properties are assessed significantly lower than commercial and industrial properties because of the inherent problems in using sales analysis data.

1. The number of properties sold is low. In the June through August, 1975 period there were only 112 commercial and industrial properties sold as compared to approximately 7800 residential sales (6338 verified sales) in the same period. Since the sales were not selected randomly, there is a large chance that they were not representative of the entire population.



2. Noncash considerations are often involved in sales of commercial and industrial properties and these considerations may not have been reflected in the County's records. Trust deeds bearing less than current market rates of interest that sellers take as partial payment are examples.

3. Sales often include personal property as well as real property.

The Assessor supplied us with weighted mean sales ratios, which we did not confirm, covering sales in 1975. These ratios are also shown on Exhibit 11.

#### SALES VERIFICATION

Sales verification involves obtaining information from the buyer and/or seller for real property sales. The Assessor's office seeks answers to such questions as: were there noncash considerations? Did the sale include personal property items? Was the sales price reported properly? The sales verification information is obtained through letters mailed out shortly after the sale is reported. When sales prices have been verified, the verified sales price is entered into the CAA computer system master file.

As a by-product of our sales analysis, we compared the number of verified sales to the total number of sales. Exhibit 12 shows this comparison.



The percentage of verified sales shown in Exhibit 12 is lower than the percentage indicated in the logs the Assessor's office keeps. We were told that this could have been caused by procedural errors made when the computer-maintained information which we analyzed was posted to the CAA master file. We were not able to investigate this further. In any case, unless there was some procedural bias which affected the data, Exhibit 12 indicates that the verification results for nonresidential properties are not nearly as good as those for residential properties.

Recommendation 10: Correct procedural problems which may result in sales verification results being improperly posted to computer files.

Recommendation 11: Investigate at least a representative sample of unverified residential sales and all unverified commercial and industrial sales.

Commercial and industrial sales verification is more important than residential sales verification; there are fewer commercial and industrial sales, and they are more subject to noncash considerations and other distortions.







COMPUTER ASSISTED APPRAISAL (CAA) SYSTEM

Our review of the CAA system included discussions with the county data processing group (GSA), Assessor's office users, including the Standards Division, several appraisers, and various supervisory personnel, including those in charge of the conversion of the new system. Also, we used some of the information which has already been converted to do the sales analysis of residential property which was described in an earlier section.

Our overall conclusion for the CAA system is that, if used properly, the system can be a powerful tool which can significantly improve the appraisal work done for residential properties. It can provide the basis for making appraisals more consistent and for allowing an appraiser to handle a larger number of properties.

The development effort has been good from the standpoint of having significant user (Assessor's office) involvement. We do, however, see an opportunity to improve the results which are obtained by the system.

What CAA Does

The CAA system maintains a data base of information for real property. The information includes descriptive property characteristics, such as: square feet, age, replacement cost, quality of construction, and number of rooms. Sales information indicating the time of sale, sales prices, assessed values, and



The two basic types of appraisal tools which the system will provide to appraisers are:

1. Value sheets. These are one-page summaries for all real property parcels; the sheets show all of the characteristics of the properties and the estimated sales prices as calculated by regression and cost update. The sheets also show the appraised value for the current roll and any more recent value changes.
2. Comparable sales reports. These reports show recent sales for parcels similar to the properties which the appraiser is working on.

Finally, the CAA system provides some miscellaneous types of management and exception reporting capabilities. For example, it is already being used to monitor the results of sales verification and to produce sales ratios (appraised value compared to sales price) for individual appraisers.

#### Impact on Real Property Appraisal Effort

Current plans for using the CAA system are as follows:

1. The Standards Division will use the sales analysis capability to determine the neighborhoods or sub-neighborhoods which are most in need of reappraisal work. Sales ratios and coefficients of dispersion will be used as the basis for this



determination. Those neighborhoods for which sales ratios are significantly lower than the county-wide average, indicating that properties are underassessed, and those where the dispersion coefficient is high, will be selected for analysis first.

2. The SPSS regression programs will be used to analyze each neighborhood and to determine the relationship between property characteristics and sales prices for those properties which have been sold recently.
3. Once the relationships between sales prices and property characteristics have been determined, the relationships will be posted to the CAA master file, and estimated sales prices will be calculated for those properties. Value sheets will then be produced and given to the appraisers who are to work that specific neighborhood.
4. The appraisers will use the value sheets and "work the neighborhood" in much the same manner as the map book areas are presently reappraised. This means that individual appraisers will be using the new tools to make the same types of judgements which have previously been made. As described in the real property section, this would involve



individual appraisers determining which properties were to be visited and which properties would be left alone or reappraised by trending or regression.

Recommendation 12: Use the CAA system to set uniform guidelines for reappraisal of residential properties.

The CAA system can provide exception reporting to indicate properties for which estimated sales prices, calculated by regression or the cost update approach, differ significantly from the current appraised full cash values. The Assessor should set the guidelines to be used by all residential property appraisers. For example, he might say that all single family dwellings for which estimated sales prices differ from trended roll values by more than \$\_\_\_\_\_ or \_\_\_\_\_% should receive a reappraisal which includes a visit to the residence, a thorough verification of characteristics, and a review of comparable sales.

The CAA system should be used iteratively to determine the number of properties which fall within the Assessor's preliminary guidelines. The guidelines should be adjusted to reflect the available staffing and the level of coverage desired. For example, if a deviation of \_\_\_\_\_% from estimated sales prices is found to provide adequate equalization, the workload can be expected to shift from year to year to the extent that more or fewer properties fall within this criterion.



We were told there are plans to use the CAA system in a similar manner to that described above. This information, however, reached us when our study was virtually completed, and we were not able to review the plans.

Ideally, the appraisal and workload guidelines should be set at the beginning of each appraisal year. This would require analyzing all of the neighborhoods which are to be reappraised to determine the extent of variation of prior roll values from computer-calculated estimated sales prices. There are several constraints on the ability to complete this type of analysis.

1. Analysts must review the results of the statistical regression analysis and rerun the analysis several times to finalize the relationships between property characteristics and sales prices. The Standards Division has completed regression analysis for one neighborhood. As would be expected, there were a number of "learning curve" mistakes made; once the Division becomes familiar with the process, it should go much faster.
2. The CAA system can use regression results to calculate estimated sales prices for only four neighborhoods a week. Thus, if half of the County (30 neighborhoods) is to be reappraised with CAA the first year, as is planned, it will take at



least seven weeks to calculate estimated sales prices for all of the neighborhoods selected.

The main constraint on the ability to develop the workload guidelines will be the analysts' time. Our conclusion is that it is feasible and desirable to calculate estimated sales prices for all selected properties at the beginning of each year.

Recommendation 13: Use the CAA system to calculate estimated sales prices, using regression analysis for all selected neighborhoods to assist in setting reappraisal guidelines.

This will enhance the Assessor's ability to provide equal treatment for all neighborhoods. It will, for example, allow supervisors to know exactly how many properties must be "walked through" during the year.

CAA sales analysis capability can be used to make judgements as to the relative success of the guidelines. The degree of equalization between neighborhoods and property value classes and other equalization measures can be tracked from year to year. The analysis described in the equalization statistics section of this report and Exhibits 8-11 are examples of this type of analysis.

#### Technical Design

For the cost update, the CAA system uses a county-wide table with neighborhood cost adjustment and depreciation factors.



The Standards Division plans to have the CAA system calculate replacement costs less depreciation neighborhood-by-neighborhood. This is to be an iterative process; the Standards Division will prepare neighborhood adjustments, have the depreciated costs calculated, review the results, and then modify the adjustments and rerun the calculations for the neighborhood.

The CAA system can do cost calculations for only four neighborhoods in each weekly processing cycle. This can become a problem because some of the cost calculations are prerequisites for the regression calculations for estimated sales prices. For example, swimming pools are a significant determinant of sales price in the regression calculations, but, swimming pools are entered as a "cost item"; the presence of a swimming pool is indicated by a cost (as calculated from the cost tables) in the CAA master file. The result is that the regression calculations can be delayed significantly while costs are being calculated.

Recommendation 14: Use county-wide cost and depreciation tables and calculate depreciated replacement costs for all neighborhoods prior to regression calculations.

Replacement cost and depreciation variations between neighborhoods should not be significant enough to distort regression calculations which use costs as determinants of value. If too much time is spent on cost update iterations, the regression processing could be delayed significantly. Once the workload



projections are developed with the county-wide approach, some fine tuning can be done neighborhood-by-neighborhood, where appropriate.

The CAA system has been designed to support primarily residential properties. The primary type of support is the calculation of estimated sales prices using regression formulas and calculation of replacement costs. Regression will probably not be applicable to many commercial and industrial properties, but calculation of replacement costs less depreciation could be; other assessing agencies are planning or actually doing this for commercial and industrial properties. The planned data base in Santa Clara County does not appear adequate for calculation of replacement costs for commercial and industrial properties.

Recommendation 15: Expand the CAA system to permit calculation of replacement costs less depreciation for various types of commercial and industrial properties.

#### Conversion Status

The CAA system is essentially completed for single family residential properties. All of the available residential characteristics have been captured, and sales history for approximately five years has been converted. The new sales analysis capability is already being used; we used it to prepare the sales analysis described in an earlier section of this report. Some preliminary use of regression analysis has been started. The regression calculations, however, will not be generally available to appraisers until July, 1976.



Commercial and industrial property characteristics will not be captured until June, 1977. Regression analysis for some commercial and industrial properties will be attempted after 1977. However, the chances of regression being generally suitable for nonresidential properties are not very high.

#### Conversion Program

There are several types of errors and consistency problems with the CAA master file. Many of them are to be expected in a data processing system conversion as massive as this one. Some of the problems, however, could probably have been avoided had the conversion control procedures been more rigorous. For example, the control over resubmission of rejected transactions was not good. Once the CAA system rejected data and printed it on edit reports, the manual procedures were such that there was no assurance that all identified errors were resubmitted into the system.

Recommendation 16:    Develop batch balancing error control procedures to preclude loss of CAA system data.

A simple error suspense log can be incorporated with batch balancing procedures to prevent some of the conversion problems we observed.

Another type of error which may have crept into the CAA master file relates to sales and sales confirmation transactions. There was apparently a lack of understanding about how to submit



sales confirmation transactions and, as a result, there are apparently a number of duplicate sales records on the master file. Instead of posting sales confirmations to the sales transaction to which they relate, a separate confirmation record was created in some cases.

There may be a temporary problem with sales analysis information. The reports which are presently being prepared analyze properties at the neighborhood level. Sales analysis was previously done by map book (there are approximately 180 map books in the County but only about 60 neighborhoods). The "neighborhood" is a new grouping of properties developed for the CAA system. The preliminary reaction of most of the real property appraisers is that the neighborhood grouping is too broad to be meaningful for comparative sales information. Their reaction may simply be a result of not yet being used to dealing with neighborhoods instead of map books. The CAA system has the capability of classifying properties into "sub-neighborhoods" which will provide sales analysis similar to that previously done at the map book level. Sub-neighborhoods have not yet been defined or coded into the system.

Recommendation 17: Develop a plan for cleaning up current inaccuracies in the CAA master file.

Some master file clean-up work is needed. For example, all of the residential properties which are missing "key" characteristics should be listed on exception reports. Key



characteristics would be those which are absolutely required for meaningful regression analysis and cost update calculations. The exception analysis should be done in order to estimate the effort which will be required to clean up the CAA master file. This information is presently not available.

Appraisers and/or data gatherers should then be assigned the job of walking through properties and correcting and updating the characteristics. This process should not necessarily be done as part of normal appraisals. Some of it, however, can be done during "walk-through" appraisals.

Recommendation 18: Determine the extent of duplicate sales and sales confirmation records in the CAA master file.

The file should be analyzed and duplicate information for, say, the last year, should be purged in order to provide for follow-up on unconfirmed sales.

Testing is another area of potential concern. We were not able to confirm the extent of testing which was done before the system was converted. We were told that the test data and predetermined results which were used are no longer available. Apparently, live data were used to a large extent to verify systems functions. We understand that users did not participate in developing predetermined results. A detailed systems testing plan for all the major functions and comprehensive, predetermined results should have been prepared with heavy participation by users.



Recommendation 19: Prepare and maintain test data for the CAA  
system.

When modifications are made to the system, the test data and results can be used to verify that the system was modified properly and that calculations are still being done correctly.







PERSONAL PROPERTY DIVISION

During the project, we reviewed the organization, functions and management control techniques used by the Personal Property Division. We looked at audit planning, property statement processing procedures, quality control reviews and performance reporting.

We had conversations with the chief auditor-appraiser, assistant chief auditor-appraiser, section supervising auditor-appraisers, senior auditor-appraisers and auditor-appraisers. We observed audit and property statement processing procedures, reviewed audit documentation, and accompanied an auditor-appraiser on a field audit.

Property Statement Processing System

Manual control of returned property statements is complex and cumbersome. Assessment clerks and auditor-appraisers handle the statements a number of times in a procedure that includes several loggings, checking, calculating full cash value, reviewing, photocopying and batching. Following manual processing, these statements are sent to data processing, where they are keypunched and entered onto a computer master file. All of the roll information on each property statement is keypunched every year.

Forty auditor-appraisers spend about 20% of their time processing property statements. Twenty-three permanent and



thirteen temporary clerks spend 43% of their time processing statements. Most of this effort is concentrated during March, April and May. Auditor-appraisers spend 46% of their time on auditing; this could be increased if personal property statement processing were simplified.

We estimate the "full-time equivalent" of five auditor-appraisers and nine clerical people can be eliminated with a new system for processing personal property statements. This represents a potential gross saving of \$165,000 per year in salaries. Additional savings would come from eliminating Xerox copies which are presently made, and possibly eliminating more clerical positions by mechanizing time and performance reporting and other related tasks.

The approach used for revising procedures has not been effective. Too much emphasis has been placed on the documentation of details before the overall system's goals and potential benefits have been identified.

Recommendation 20: Develop a new mechanized system for processing personal property statements.

Exhibits 13 and 14 describe the functions which should be part of a new system. The Exhibits compare current procedures to the proposed approach and identify which functions should be done manually and which should be done by a computer system. The essentials of the new system would be to:



1. Maintain a computer master file for all personal property owners who are to file returns. Include prior year balances for inventory, machinery and equipment, and furniture and fixtures.
2. Do only minimal clerical processing for property statements before having them keypunched and computer-verified for accuracy, completeness, and reasonableness.
3. Have the computer system make extensions, calculations of depreciation factors and comparisons with prior years' returns.
4. Manually handle exceptions rather than all documents. Concentrate clerical and auditor-appraiser efforts on clearing errors, investigating unreasonable information, and testing randomly selected returns.
5. Have the computer system monitor the status of all property statements, including monitoring for:
  - Statements returned to the property owners.
  - Statements selected for audit and not yet audited.
  - Workload assignments and completions by auditor-appraiser.
  - Time since last audit.



We believe that such a system would qualify under the County prerequisites for new data processing systems. In general, all new systems being developed must have a payback period of one year or a three year payback period for all systems being designed. The payback period, development costs, and net operating savings should be determined in the initial design phase of a system design and installation project.

We understand that the Assessor's office has been attempting to justify a new personal property system, but has been unable to do so.

#### Changes to Procedures

The Personal Property Division has been reviewing procedures for the past year in an attempt to make the procedures more efficient. The review has involved preparing very detailed flowcharts for paper flows and procedures performed. The review was begun in response to the generally accepted belief that procedures need significant improvement as pointed out by the State Board of Equalization and in other audits.

Recommendation 21:    Redirect the present review of personal property procedures to focus on the definition and justification of a new system.

#### Formal Audit Planning

Auditor-appraisers rely on their own experience and professional judgement to determine how much work to do and how



to document it. Consequently, there is typically not much use made of accumulated departmental knowledge of audits in planning and scheduling work. This makes it difficult for supervisors to monitor the quality of work done on an audit.

Recommendation 22: Develop work programs for all audits.

Work programs are simply lists of audit steps to be performed and an estimate of the time required for each step. The work programs should also include a brief description of the property owners' accounting procedures and records, and a brief description of the audit objectives.

Work programs for smaller audits, perhaps those which require less than two to three days, can be standardized. It may be appropriate to have different programs for different types of businesses or industries.

Work programs for larger audits should be developed specifically for each audit and should make use of prior experiences on the audit. Since several years elapse between audits, it would be desirable to have the auditor-appraiser develop a work program draft for the next audit as a final step of the current audit.

Performance Standards

Presently, there are broad performance standards (time estimates) for how long audits should take. The standards are based upon the dollar value of the personal property audited and



are used to set workloads. Actual time spent on audits, however, varies dramatically from the standards, which indicates that the standards are too broad and a strict dollar-value basis is not appropriate.

Recommendation 23: Develop time estimates in conjunction with audit work programs.

The time estimates should be "built up" from the tasks identified for each audit. Actual time spent on each task should be monitored and used to adjust subsequent work programs for the same or similar companies or industries. Adjustments can be made to the work programs if a supervisor feels that too much or too little time is planned commensurate with the total property value.

#### Quality Control Reviews

Supervisors presently review audits using a checklist approach which is primarily a brief review of the completeness of the audit forms filled out.

Recommendation 24: Have supervisors periodically make detailed field reviews for a sample of small audits.  
Review all larger audits in detail.

#### Management Reporting

Auditor-appraisers periodically fill out time summaries indicating the number and size of audits completed and the time spent on the audits. The time summaries are recapped monthly to give comparisons of hours per workload unit (a workload unit is



a standard unit of measure assigned to audits as a function of the dollar value of personal property audited). The number of audits completed on the time summaries and the management reports is difficult to verify because of the manual reporting procedures. It is difficult to determine causes of significant variations in audit times, and the resultant management reports do not provide a basis for readily isolating troublesome audits. The time per audit unit varies dramatically from individual to individual.

Recommendation 25: Incorporate management reporting and audit time reporting into the proposed new personal property system.

Our study of the Personal Property Division included an evaluation of personnel control techniques and a review of management reports. We investigated which techniques are being used and determined whether they are being used effectively. The results of this analysis are shown on Exhibit 16.







OTHER COUNTY ASSESSORS' OFFICES

We had long discussions with top managers in two other county assessors' offices - San Mateo and Sacramento. The purpose of the visits was to discuss organization and general practices in the areas for which we developed our major conclusions. We were particularly interested in the following:

- Staffing levels by type of property in the Real Property Division.
- Experiences in the first year CAA was implemented.
- The use of CAA to develop reappraisal guidelines and workload estimates.
- Data processing support for the Personal Property Division.

Staffing Levels

Exhibit 15 shows a comparison of current and planned Santa Clara staffing levels with the San Mateo and Sacramento staffing. The staffing is difficult to compare directly for the following reasons:

1. Revaluation frequencies are different. Although there are more residential properties per appraiser in San Mateo than there are presently in Santa Clara, Santa Clara revalues residential properties every year as opposed to once every two or three years in San Mateo. Similarly, commercial and industrial properties in San Mateo are currently being revalued once every three years versus annually in Santa Clara.



2. In Sacramento, the commercial and industrial appraisers also appraise the complex residential properties.

Our general conclusions about planned Santa Clara County staffing remain the same. The shift of appraisers from residential to commercial and industrial work should provide ample coverage for commercial and industrial appraisals. Although the number of residential properties per appraiser will increase to exceed that in the other counties, the staff should be able to handle the work if CAA is used effectively.

#### First-Year Experiences

Both San Mateo and Sacramento County Assessors' offices were able to increase the number of residential properties revalued the first year CAA was implemented. There were, however, other significant changes made in one of the counties. We were told by both the San Mateo and Santa Clara Assessors and a State Board of Equalization representative that it will be difficult to handle more properties per appraiser in the first year. Again, we believe some shifting is possible in the first year given the assumptions underlying Recommendation 3.

#### Reappraisal Guidelines

To the best of our knowledge, no other county is using CAA to develop uniform guidelines, in the manner we have recommended, for selecting residential properties for appraisal. We discussed our idea with both of the Assessors we visited and



a representative of the State Board of Equalization (who is the recognized authority on CAA systems in California). We still feel strongly that the guidelines should be developed and see no major technical problem which would prevent the development.

Neither San Mateo County nor Sacramento County uses different cost tables for each neighborhood for the cost update calculations which the CAA system does. The State Board of Equalization representative, however, sees some merit in having the neighborhood capability, but only for exceptions. He suggests using the same basic table for the entire County and only modifying it where there is a clear cost differential which cannot be handled by the other cost update calculations. Labor costs in outlying areas such as Gilroy, for example, may be such that construction costs are lower. Hillside construction costs, however, in Los Altos Hills and Saratoga can probably be handled by specifying the type of construction on the CAA master file.

#### Personal Property Division Data Processing

Santa Clara County's personal property data processing system is clearly in need of replacement. Other counties are doing at least the basics of what we have recommended. San Mateo County, for example, does not recreate the roll each year (re-keypunch all information) and does store prior year information to use as a basis for validating returns.







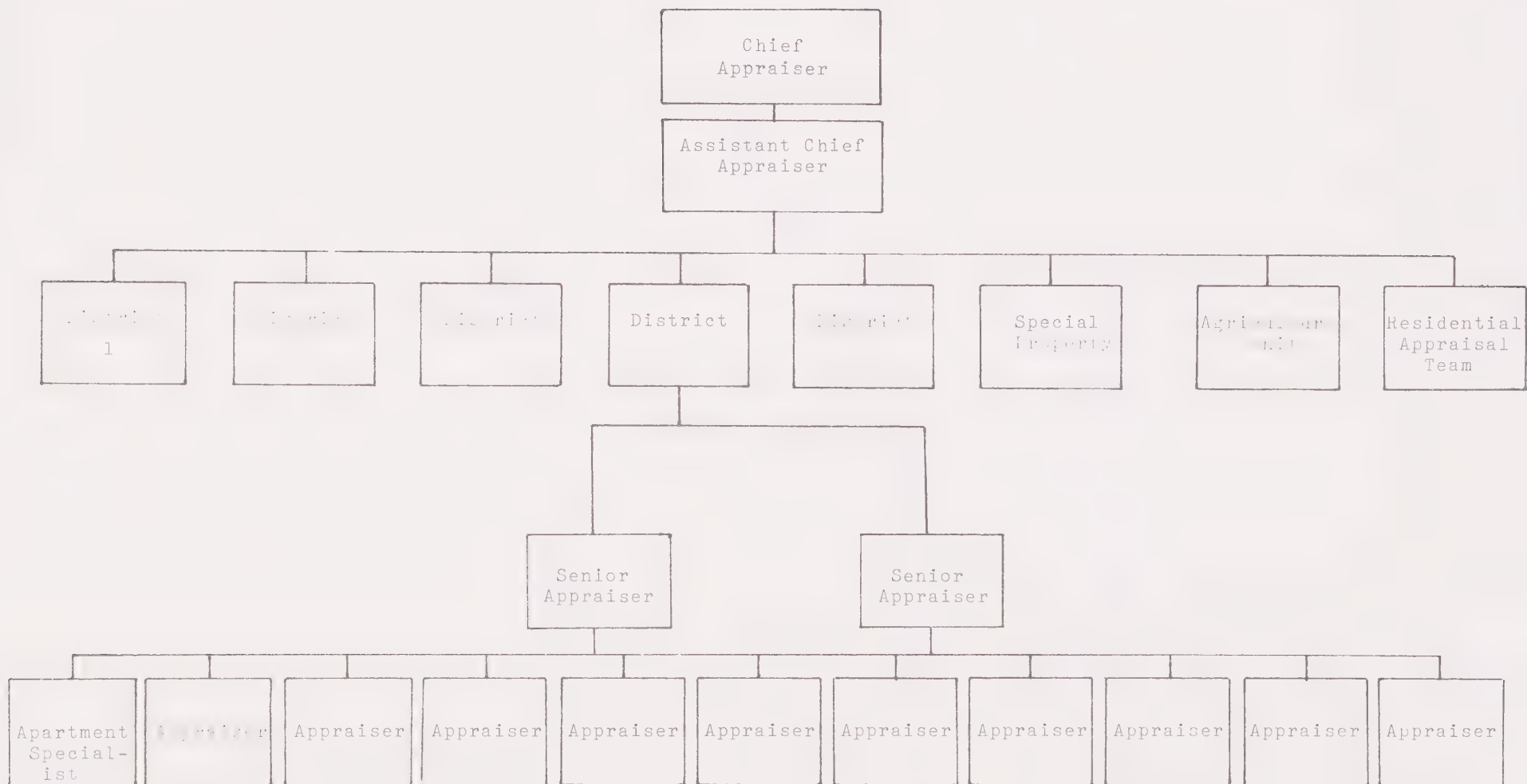
COUNTY OF SANTA CLARA  
1975-76 SECURED ROLL STATISTICS

<u>Property Type</u>	<u>Number of Parcels</u>	<u>% Total Parcels</u>	<u>\$ Assessed Value (Millions)</u>	<u>% Total Value</u>
Residential (single family)	263,127	81.2%	1,995	53.8%
Residential (multi)	18,857	5.8	426	11.5
Industrial	4,431	1.4	545	14.7
Commercial (with shopping centers)	8,619	2.7	412	11.1
Vacant land	16,641	5.1	119	3.2
Agricultural	10,302	3.2	157	4.2
Miscellaneous	1,987	0.6	55	1.5
Totals	323,964 =====	100.0% =====	3,709 =====	100.0% =====



REAL PROPERTY DIVISION

CURRENT ORGANIZATION





REAL PROPERTY DIVISIONSTAFFING LEVELS

<u>Appraiser Categories</u>	<u>Current Staff</u>	<u>Authorized Staff</u>	<u>Assessor's Target With CAA*</u>
Single family residential	47	51	29
Multi-family residential	5	5	10
Commercial/industrial	16	18	35
	--	--	--
Totals	68	74	74
	==	==	==

\* Based on Assessor's projection of CAA allowing shift of 17 single family residential appraisers and ability of single family residential appraisers to handle 10,000 parcels per year.



REAL PROPERTY DIVISION  
RECOMMENDED STAFFING CHANGES

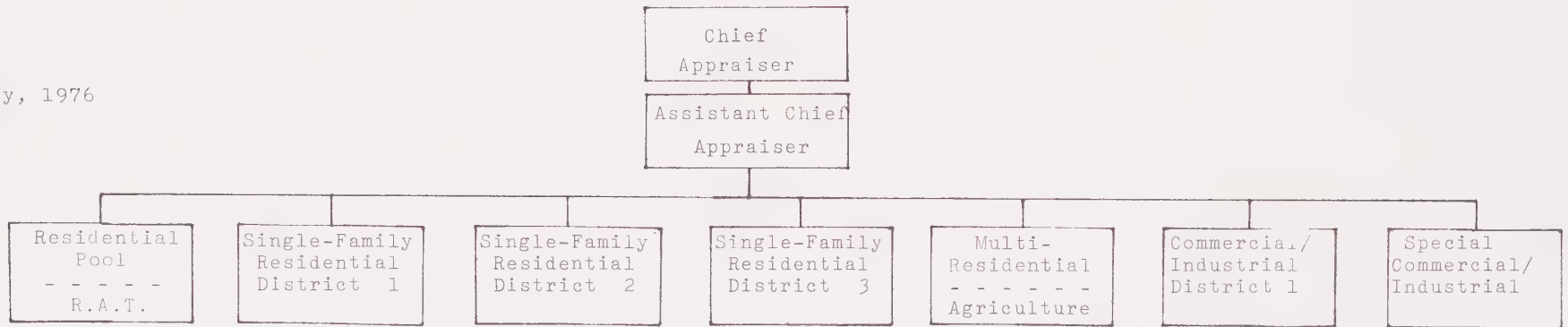
<u>Appraiser Categories</u>	<u>Authorized Now</u>	<u>July, 1976</u>	<u>1977</u>
Single family residential	51	40	32
Multi-family residential	5	7	7
Commercial/industrial	18	27	35
	--	--	--
Totals	74	74	74
	=	=	=



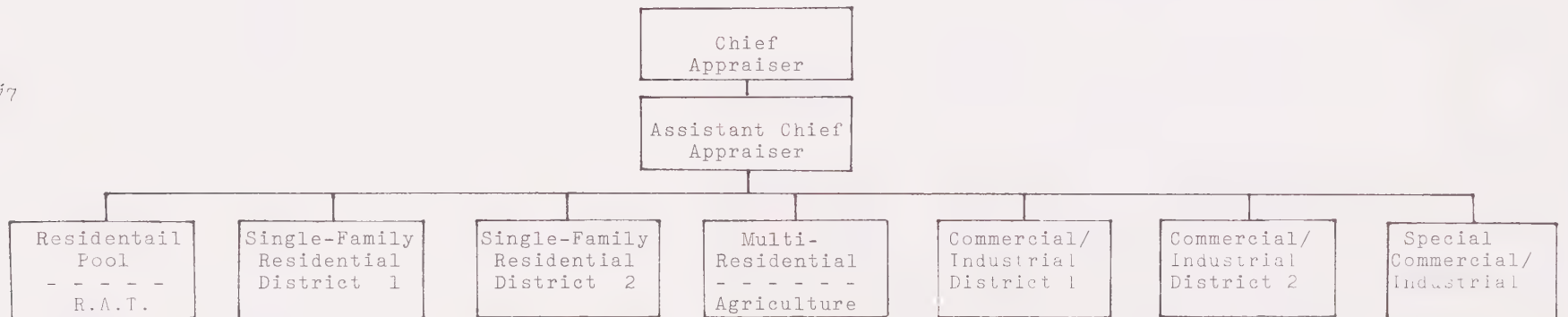
REAL PROPERTY DIVISION

PHASED REORGANIZATION

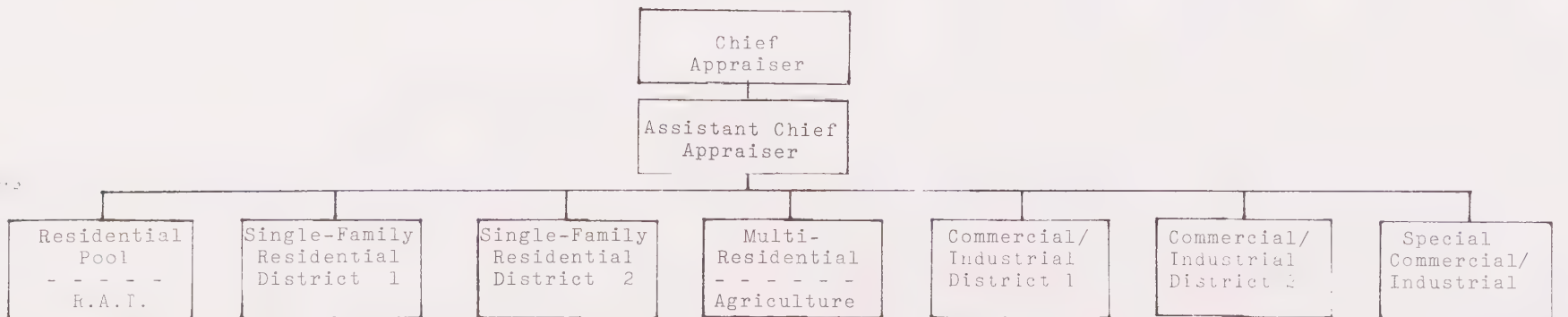
July, 1976



1977



1978





STATE BOARD OF EQUALIZATION

WEIGHTED MEAN APPRAISAL RATIOS, 1973\*

Secured Assessed Value (000's)			Single-Family		Commercial and Industrial		All Properties	
			Number	Ratio	Number	Ratio	Number	Ratio
Up to \$	2		2	98.8%	1	84.0%	6	95.2%
\$ 2 -	9		117	89.2	3	92.4	138	89.6
10 -	19		26	84.4	2	94.4	39	86.8
20 -	49		2	94.4	20	85.2	30	101.6
50 -	99		-	-	9	110.4	15	103.2
100 -	499		-	-	15	89.6	26	90.4
500 -	999		-	-	4	92.0	8	91.2
1,000 -	4,999		-	-	8	97.6	9	97.2
5,000 Up			-	-	3	94.4	3	94.4
	Totals		147	88.0%	65	89.6%	274	90.4%
			===	=====	==	=====	===	=====

\* Ratios of Assessor's full values (4 times assessed values) to Board - appraised values.



STATE BOARD OF EQUALIZATION  
WEIGHTED MEAN APPRAISAL RATIOS\*  
FOR SECURED REAL PROPERTY, 1967-73

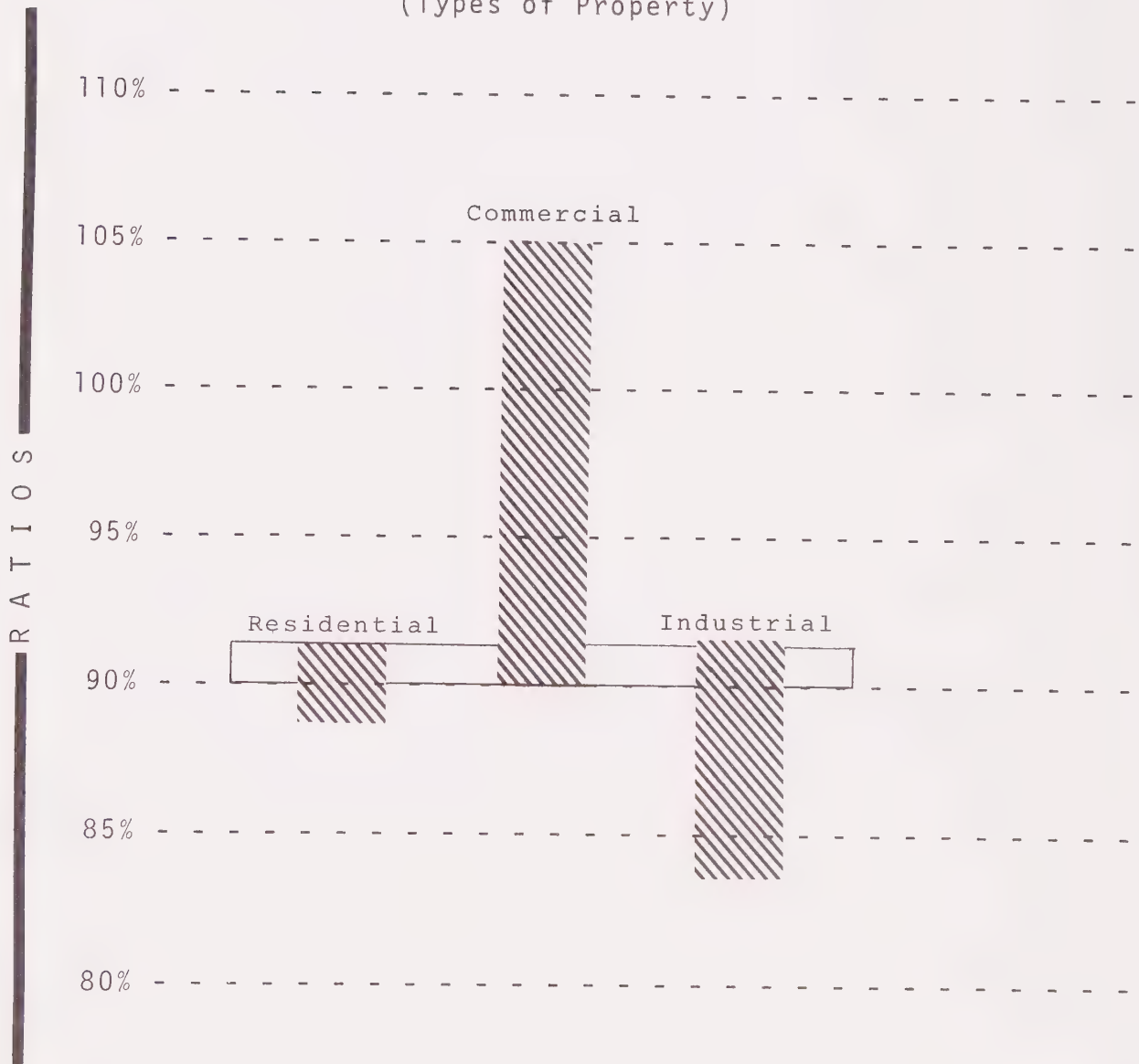
<u>Property Use-Type</u>	Ratios(%)		
	<u>1967</u>	<u>1970</u>	<u>1973</u>
Vacant residential lots	72.4	93.6	96.4
Single family residential	87.2	91.2	88.0
Multi-family residential	89.6	95.2	90.8
Commercial	85.2	96.8	91.6
Industrial	95.2	94.0	94.4
Rural	57.2	90.0	88.0
Other	-	99.2	115.2
	----	----	----
All types	86.8	92.4	90.4
	====	====	====

\* Ratios of Assessor's full values (4 times assessed values) to Board - appraised values.



95% CONFIDENCE INTERVALS FOR STATE BOARD  
OF EQUALIZATION UNWEIGHTED MEAN  
APPRAISAL RATIOS, 1973

(Types of Property)





RESIDENTIAL SALES RATIOS BY PRICE RANGEJUNE - AUGUST, 1975

<u>Price (000's)</u>	<u>Number Sold</u>	<u>Average Sales Price</u>	<u>Sales Ratio*</u>	<u>Average Tax Effect**</u>
Under \$20	210	\$ 16,800	95%	\$(91.76)
20 - 40	2,849	32,300	81	(38.22)
40 - 60	2,285	47,600	77	(.37)
60 - 80	639	67,700	74	63.83
80 - 100	209	87,900	74	93.37
100+	144	125,700	71	216.85
County Average:		\$ 44,800	77%	

\* Weighted mean ratio of Assessor's full value  
to sales price.

\*\* Increase (decrease) in annual taxes if the county-  
wide average 1975-76 tax rate of \$12.40 were  
applicable and assessments were equalized at  
77% of sales prices.



DISTRIBUTION OF MAP BOOK SALES RATIOSJUNE - AUGUST, 1975

<u>Sales Ratios</u>	<u>Number of Properties</u>	<u>Number of Map Books</u>	<u>Average Sales Price</u>	<u>Average Tax Effect*</u>
56 - 60%	18	1	\$70,000	\$ 403
61 - 65	99	4	51,000	214
66 - 70	353	14	58,000	154
71 - 75	1,729	48	50,000	55
76 - 80	2,037	45	43,000	(19)
81 - 85	1,630	34	40,000	(80)
86 - 90	354	8	34,000	(121)
91 - 95	20	1	38,000	(194)

County average:                   \$44,800 - 77%

\* Increase (decrease) in annual taxes if the county-wide average 1975-76 tax rate of \$12.40 were applicable and assessments were equalized at 77% of sales prices.



SALES RATIOS BY CITIESJUNE - AUGUST, 1975

<u>City</u>	<u>Number Sold</u>	<u>Average Sales Price</u>	<u>Sales Ratio*</u>	<u>Average Tax Effect**</u>
Los Altos Hills	125	\$91,600	74%	\$ 79
Palo Alto	294	58,900	75	30
Mountain View	235	52,800	79	( 26 )
Sunnyvale	420	46,200	75	26
San Jose	1,422	36,800	78	( 12 )
Milpitas	367	33,700	82	( 54 )

\* Weighted mean ratio of Assessor's full value to sales price.

\*\* Increase (decrease) in annual taxes if the county-wide average 1975-76 tax rate of \$12.40 were applicable and assessments were equalized at 77% of sales prices.



SALES RATIOS BY TYPE OF PROPERTYJUNE - AUGUST, 1975

	<u>Number Sold</u>	<u>Average Sales Price</u>	<u>Sales Ratio*</u>	<u>Assessor's Sales Ratios, 1975</u>
Commercial	74	\$117,426	83%	79%
Industrial	38	279,519	70	78
	---	-----	--	==
Totals	112	\$172,422	76%	
	===	=====	==	
Residential	6,338	\$ 44,800	77%	78%

\* Weighted mean ratio of Assessor's full value to sales price.



SALES VERIFICATION RESULTSJUNE - AUGUST, 1975

<u>Single Family Residential Property</u>	<u>Number of Sales</u>	<u>Sales Value</u>	<u>Average Price</u>
Total sales	7,823	\$371,619,000	\$47,500
Verified sales	6,556	298,778,000	45,600
% verified	84%	80%	
<u>Other Property</u>			
% verified	77%	64%	\$67,000

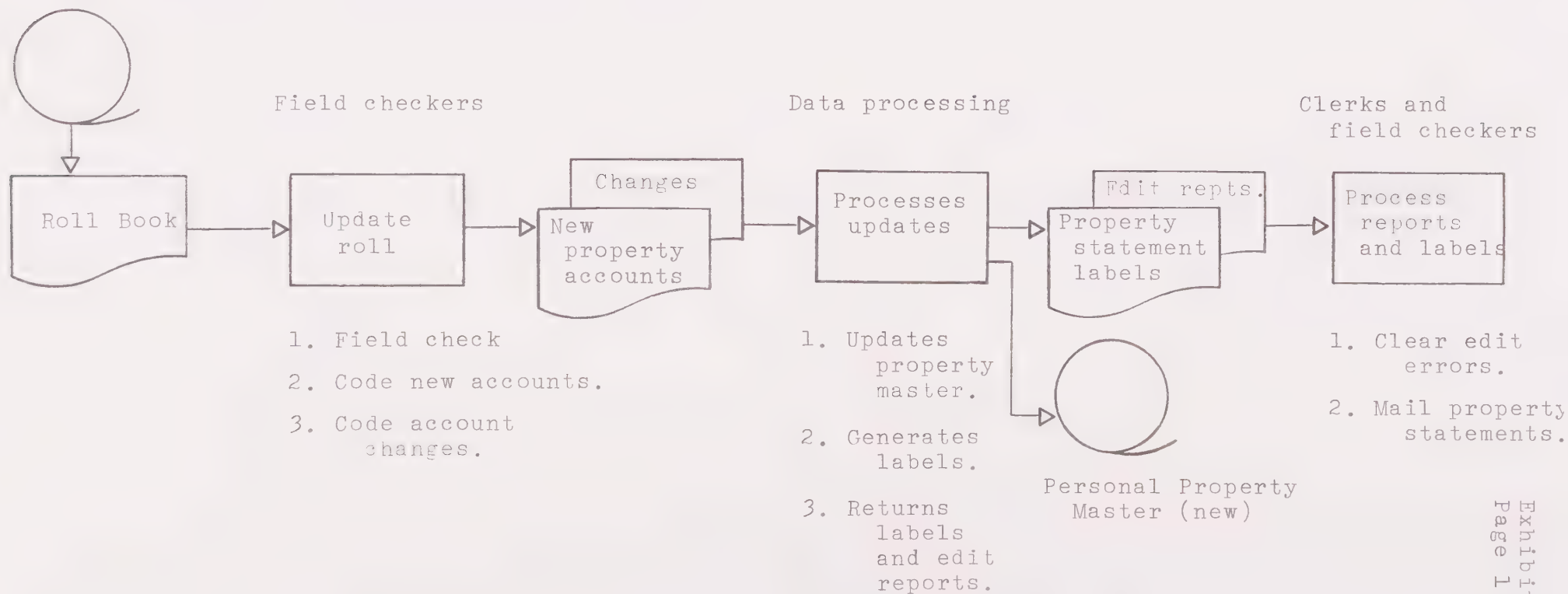


# RECOMMENDED PERSONAL PROPERTY SYSTEM

## CONCEPTUAL FLOWCHART

### FIELD CHECKING AND MAILING STATEMENTS

Personal Property  
Master (old)

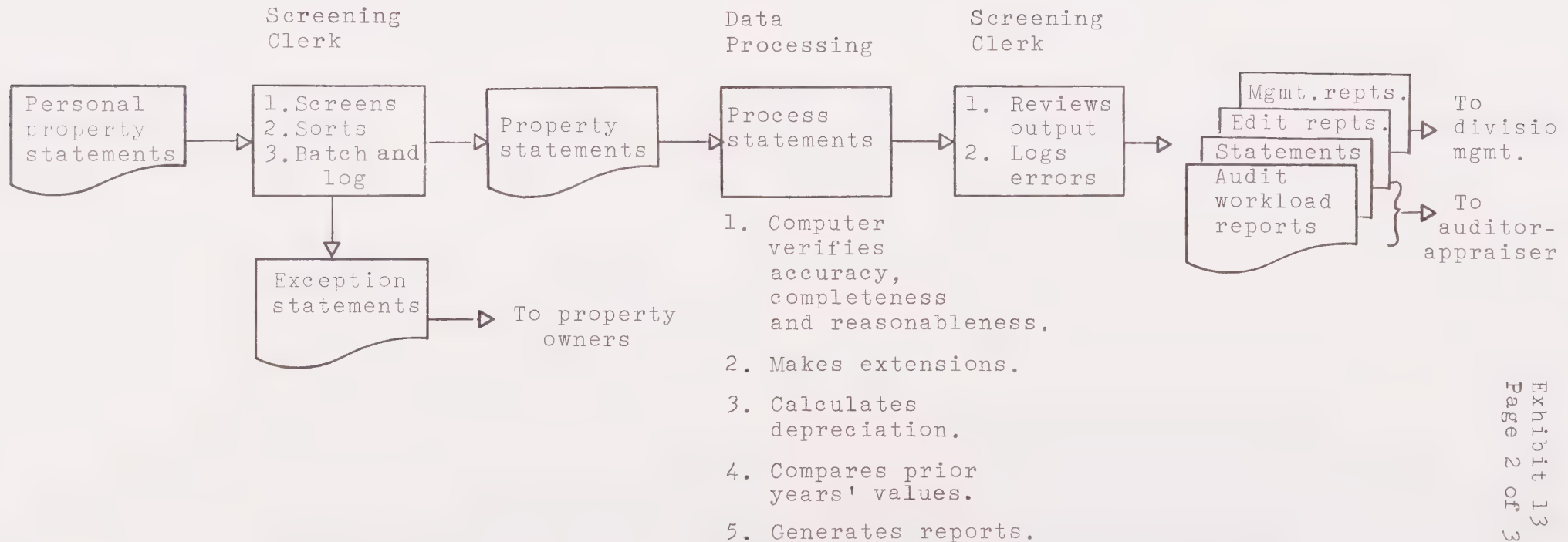




# RECOMMENDED PERSONAL PROPERTY SYSTEM

## CONCEPTUAL FLOWCHART

### PROCESSING RETURNED PROPERTY STATEMENTS

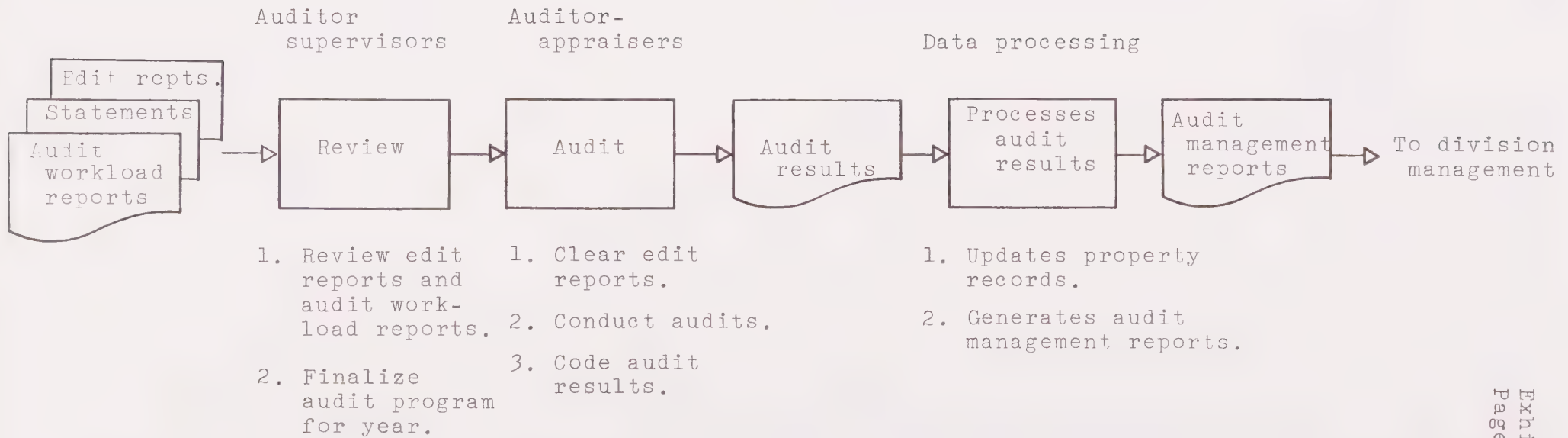




RECOMMENDED PERSONAL PROPERTY SYSTEM

CONCEPTUAL FLOWCHART

AUDITING





PERSONAL PROPERTY STATEMENT PROCESSING SYSTEM -  
DESCRIPTION OF FUNCTIONS

CURRENT SYSTEM:

1. Field checkers check roll book.
2. Clerks mail property statements.
3. Clerks log returned statements.
4. Clerks pull open file.
5. Appraiser logs field book.
6. Appraiser checks statement.
7. Clerk calculates FCV.
8. Appraiser reviews calculations.
9. Appraiser logs field book.
10. Supervisor reviews.
11. Clerks photocopy statements.
12. Clerks batch statements for EDP.
13. EDP keypunch all roll data for all statements.
14. Clerks review computer listings.
15. Clerks prepare time analysis of audits.

PROPOSED SYSTEM:

	<u>Computer or Manual</u>
1. Field checkers check roll book	M
2. Clerks mail property statements	M
3. Clerk batches and logs returned statements	M
4. Computer checks accuracy, completeness and reasonableness	C
5. Computer compares to prior year's return, does extensions, including FCV calculations	C
6. Computer generates edit and control reports, audit workload reports and management reports	C
7. Auditor-appraisers handle statement exceptions and conduct audits	M
8. Auditor-appraisers input audit results to EDP	M
9. Computer updates property master file and produces audit variance reports and other management control reports	C



COMPARISON OF STAFFING LEVELS TO OTHER ASSESSORS' OFFICES

	Number of		
	-----		
	<u>Appraisers</u>	<u>Properties</u>	<u>Properties Per Appraiser</u>
Residential (Note 1)-			
Santa Clara (current)	51	295,000	5,784
Santa Clara (planned)	29	295,000	10,180
San Mateo	21	155,000	7,381
Sacramento	21	163,000	7,762
Commercial and Industrial*-			
Santa Clara (current)	18	16,500	917
Santa Clara (planned)	35	16,500	471
San Mateo	21	13,600	647
Sacramento	(Note 2)	N/A	N/A

\* Including vacant land zoned for commercial or industrial use.

Notes

1. Residential includes single family only.
2. Sacramento commercial and industrial appraisers also do complex residential properties.



## MANAGEMENT REPORTING SUMMARY

<u>Management Reporting Categories</u>	<u>Real Property Division</u>	<u>Personal Property Division</u>
1. Performance reports	Performance reporting is weak. Reports do not measure actual performance versus performance objectives. No quality control reporting exists.	Productivity reporting includes audits completed only. No quality control reporting exists. Minimal absenteeism and turnover reporting is used.
2. Staffing schedules	Staffing schedules are developed by supervisors with an emphasis on even workloads. More attention needs to be given to staffing based on reappraisal guidelines.	Schedules fail to relate job descriptions with performance objectives.
3. Performance objectives	Performance goals are not translated into measurable performance objectives.	Audit completions are only measurable goals.
4. Activity standards	Activity standards are not available. This contributes to the difficulty of staff scheduling.	Activity standards are limited to time standards for a block of audits. The standards are not updated.
5. Organization charts	Organization charts are good, and they are current. They relate responsibility and authority. They accurately show lines of communication and reporting.	Organization charts are good, and they are current. They relate responsibility and authority. They accurately show lines of communication and reporting.
6. Head count reports	Reports are sufficient.	Reports are sufficient.
7. Quality control	Quality control policies are general and not formalized.	Quality control policies are good. They cover supervision, work review and reappraisal guidelines. However, practices for following the policies are not formalized.



# 1975-76 RECOMMENDATIONS

## STATE BOARD OF EQUALIZATION

1975-76 SBE Recommendations	Assessor's Response	Our Comments
1. Restructure appraisal staff into specialized crews.	Final utilization will be based on experience gained following CAA implementation.	Reorganization should occur <u>with</u> implementation of CAA - not after. <u>Plan now.</u>
2. Develop more complete appraisal records for commercial/industrial, multi-family properties.	Records have been developed and should be implemented after end of 1975.	Records ready for implementation. Some have been used already.
3. Remove extraneous material from appraisal file.	260,000 single family residential records have been purged. Other records are in process of review.	Single family residential records have been cleaned up. Commercial/industrial records (excluding special district) still need purging.
4. Assign senior appraiser to supervise multi-family property appraisals. Include all properties with five or more units.	Multi-family crew is being <u>considered.</u>	Multi-family appraisal unit should be established with a supervisor. This should occur with recommended reorganization this year.
5. Include all property income in income approach calculations. Include tax component in capitalization rate.	Assessor concurs and is following concepts.	We agree with State Board but have not investigated implementation.
6. Reappraise industrial properties regularly using all applicable approaches to value.	Assessor needs more commercial/industrial appraisers. Plans to shift appraisers from single family residential with implementation of CAA.	Land values are updated annually. Appraisers say depreciation offsets increased replacement costs. We think this is a weak argument. We recommend a phased shift of appraisers from single family residential to commercial/industrial and establishment of commercial/industrial unit(s).



1975-76 RECOMMENDATIONS

STATE BOARD OF EQUALIZATION

<u>1975-76 SBE Recommendations</u>	<u>Assessor's Response</u>	<u>Our Comments</u>
7. Revalue the improvements on rural properties.	Assessor agrees - will do in 1976-77.	We agree in general with the State Board. Both the cost approach and the statutory income approach should yield improvement values materially higher than out-of-date costs less depreciation.
8. Use reasonable terms of possession in determining possessory interest values.  Include tax component in discount rate.	Assessor thinks he does, but is reviewing.  Assessor concurs and has directed change.	We question the validity of the Board's position that estimated terms should exceed average terms.  A tax component should be included in the capitalization rate used in the income approach when the estimated taxes on the possessory interest are not deducted from the economic rent to arrive at the income to be capitalized.
9. Appraise quarrying properties using Assessors' Handbook techniques.	Assessor anticipates use of "unit" approach in 1976-77.	We agree with the State Board. A royalty approach to mine and quarry values is seldom as reliable as the alternative income approaches.
10. Employ market data in appraising private utility water companies.	Sales to public entities should be considered in arriving at a value indicator for private utility water companies.	We agree with the State Board. We believe methods used by the Assessor produce excessive market value estimates.



1975-76 RECOMMENDATIONS

STATE BOARD OF EQUALIZATION

<u>1975-76 SBE Recommendations</u>	<u>Assessor's Response</u>	<u>Our Comments</u>
11. Business Property: Restructure the property statement processing system.  Process as many statements as possible without reference to prior years' files.  Minimize geographic area responsibilities; re-evaluate field canvassing method of identifying property owners.	Assessor concurs and has implemented.  Assessor concurs and will implement for fiscal year 1976-77.  Accuracy near 100%. No change planned.	Design and implement a mechanized property statement processing system. Our recommendations are discussed in Section V - Personal Property Division.
12. Assign mailing of exemption forms and processing of ownership changes to same people.	Concept being considered.	We agree with the State Board.
13. Abolish item-by-item verification of exemptions on assessment roll. Establish batch controls.	Verification has other benefits and is cost-justified.	We agree with the State Board. Institution of exception reports would greatly reduce the required checking even though many exemptions on the exception reports are valid.
14. Expand the responsibility of Standards Division.	Plans for expansion are dependent on fiscal consideration.	Expand the management reporting and quality control responsibilities of the Standards Division.



1975-76 RECOMMENDATIONS  
STATE BOARD OF EQUALIZATION

<u>1975-76 SBE Recommendations</u>	<u>Assessor's Response</u>	<u>Our Comments</u>
15. Revise the present time and volume reporting system.	Assessor recognizes need for improvements and plans to implement.	Time and volume reporting needs to be revised. See our recommendations in Section II - Real Property Division and Section V - Personal Property Division.
16. Reorganize the staff to achieve greater coordination.	Assessor is substantially in agreement and plans an in-depth systems study within the next year.	We suggest that, as the organization changes occur, the Assessor restructure the organization to avoid situations in which a line supervisor has but one line "supervisee".
17. Revise the procedures for unsecured roll preparation.	Assessor feels automation of the Business Division functions will be feasible as well as practical.	We recommend design and implementation of a mechanized property statement processing system. See Section V - Personal Property Division for discussion of this recommendation.
18. Prepare and analyze work flowcharts to ensure efficiency of the office layout plan for the new building.	Assessor feels serious consideration was devoted to work flow between divisions in all instances. However, Assessor was constrained by the allocation of space and floor location, areas over which he had no control.	(Not investigated.)



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EVALUATION OF THE ORGANIZATION & OPERATION OF  
THE SANTA CLARA COUNTY ASSESSOR'S OFFICE

REF 917.9473 Arthur